

# What's New With

# RED AIRPOWER

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Here's a summary of the latest available information on Soviet air intelligence. Because of the nature of this material, we are not able to disclose our sources, nor document the information beyond assurance that the sources are trustworthy.

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Do the Russians possess a surface-to-air missile that could have hit our U-2 photo plane at 60,000 feet or higher? Sources abroad long have maintained that they do have such a missile.

One of the key men in the USSR's antiaircraft missile program is Semyon Lavochkin, one-time aircraft designer who has turned out no new aircraft in several years, but who occasionally wins Stalin or Lenin prizes. Lavochkin has reportedly contributed greatly to the aerodynamics of Soviet antiaircraft missiles, and perhaps also to their air-launched cruise missiles.

The U-2 incident brought forth numerous reports of Soviet flights over Alaska and other parts of the western hemisphere including Greenland. Recently, the Soviets have taken to flying over Japan on a regular basis, using high-altitude, multiengine jets.

So far as is known, the Russians have not designed any special reconnaissance aircraft in recent years, though they have had such aircraft in the Red Air Force in the past. A turboprop version of the TU-4 was adapted for long-

range reconnaissance in the days following World War II. They worked on a diesel-engine aircraft at one time with the apparent aim of using it for long-range spying. But nothing appeared to have come from this project.

Currently, Russia uses jet bombers for such purposes.

Changing Russian attitudes on sovereignty in outer space provide an interesting footnote to the U-2 case. Like other nations, the Russians in the past said all space above their territory was under their jurisdiction and they had sovereignty over it. However, they began to shift on this at about the time they launched their first space satellite. Then they said a nation should exercise sovereignty over atmospheric space, but outer space should not be governed by national sovereignty.

Now the Russians are changing their tune again. In the last year, they have taken the position that, so long as outer space was used for research purposes, there should be no question of sovereignty involved, but that the laws of sovereignty should apply to space vehicles used for "spying" or political or military purposes. The first Air

Force Midas spy-in-the-sky satellite the US launches in a polar orbit therefore could bring a Soviet complaint. The Midas launched May 24 was placed in a nonpolar orbit. This orbit did not at any point take this test Midas shot over the USSR.

The "unmanned space capsule" Russia placed in orbit on May 15 was a partial failure.

Final separation of booster and space capsule was not achieved. It would have sent the latter toward the earth and a safe recovery. When the Reds triggered the separation, both the booster and the capsule went into orbit. So the hoped-for recovery did not materialize, any more than in the case of USSR's own Discoverer capsule recovery attempts.

The shot nevertheless was impressive. Placing four and a half tons in orbit is no mean feat. It once more showed Russia's advanced thrust capabilities, judged by some to be enough to launch a better-than-rudimentary, man-carrying spaceship.

Among other specifics Russian scientists worked on with the May 15 shot were these:

• **Timing of launch** during launching so that it is not too fast, a man inside a space capsule would be killed. If too slow, too much fuel would be used. The space capsule would not achieve its mission. Russians hope to send a space traveler on his way without increasing the G forces on him more than 10g during launch.

• **New fuels** The Reds say a satisfactory compromise between man and rocket calls for a ten-minute launch period during which power is applied. This is quite long, but the Russians claim they will do it with new fuels such as those tested in the May 15 shot.

Professor S. N. Vernov, mentioned in this column last month for his work on radiation belts around the earth, has won a Lenin Peace Prize for his efforts. He shared the prize, something more than 50,000 tax-free rubles (officially \$12,500), with several colleagues.

Another Lenin Prize winner was aircraft designer Sergei V. Ilyushin, who was cited for his work on the IL-18 Moscow turboprop transport. Sharing honors on the IL-18 was Alexander G. Ivchenko, who developed the turboprop engine used on the Moscow as well as on the AN-10A transport.

Russia continues its valiant efforts to sell its transports and helicopters in foreign countries. A few IL-18s and TU-104s have been sold for civil use. Helicopter sales have been practically nil. The fact that the Reds have purchased American helicopters has dampened foreign sales of their own Mi-4, and may have a bad effect on their campaign to sell transport aircraft as well. Soviet purchase of US helicopters is taken as an indication abroad that even the Russians feel they have something to learn from the US in this regard.

The Russians have their TU-124 jet transport flying on test at Ramenskoye, not far from Moscow. It is possible the airplane will be shown publicly in the near future. This latest Tupolev design is thought to be a flying test bed for features that will be used later on a supersonic transport.

Talks between the US and USSR on direct air service between New York and Moscow were scheduled to get started by the time this appeared. However, it was not clear how much can be accomplished until the talks get started. —END